

# HoxC13 (SS-39): sc-81967

## BACKGROUND

The Hox proteins are a family of transcription factors that play a role in development and cellular differentiation by regulating downstream target genes. Specifically, the Hox proteins direct DNA-protein and protein-protein interactions that assist in determining the morphologic features associated with the anterior-posterior body axis. Hox proteins are involved in controlling axial patterning, leukemias and hereditary malformations. HoxC13 (homeobox C13), also known as HOX3 or HOX3G, is a 330 amino acid protein that contains one homeobox DNA-binding domain and is a member of the Abd-B homeobox family. Localized to the nucleus, HoxC13 functions as a sequence-specific transcription factor that, in conjunction with a variety of other proteins, provides cells with positional identities on their anterior-posterior axis. Via its ability to modify features of the anterior-posterior body axis, HoxC13 is thought to play a role in the development of nails, hair and filiform papilla.

## REFERENCES

1. Acampora, D., et al. 1989. The human HOX gene family. *Nucleic Acids Res.* 17: 10385-10402.
2. Apiou, F., et al. 1996. Fine mapping of human HOX gene clusters. *Cytogenet. Cell Genet.* 73: 114-115.
3. Godwin, A.R. and Capecchi, M.R. 1998. HoxC13 mutant mice lack external hair. *Genes Dev.* 12: 11-20.
4. Godwin, A.R. and Capecchi, M.R. 1999. Hair defects in HoxC13 mutant mice. *J. Investig. Dermatol. Symp. Proc.* 4: 244-247.
5. Kulesa, H., et al. 2000. Inhibition of BMP signaling affects growth and differentiation in the anagen hair follicle. *EMBO J.* 19: 6664-6674.
6. Kosaki, K., et al. 2002. Complete mutation analysis panel of the 39 human HOX genes. *Teratology* 65: 50-62.
7. Online Mendelian Inheritance in Man, OMIM™. 2002 Johns Hopkins University, Baltimore, MD. MIM Number: 142976. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

## CHROMOSOMAL LOCATION

Genetic locus: HOXC13 (human) mapping to 12q13.13; Hoxc13 (mouse) mapping to 15 F3.

## SOURCE

HoxC13 (SS-39) is a mouse monoclonal antibody raised against recombinant HoxC13 of human origin.

## PRODUCT

Each vial contains 100 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

HoxC13 (SS-39) is recommended for detection of HoxC13 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for HoxC13 siRNA (h): sc-75285, HoxC13 siRNA (m): sc-75286, HoxC13 shRNA Plasmid (h): sc-75285-SH, HoxC13 shRNA Plasmid (m): sc-75286-SH, HoxC13 shRNA (h) Lentiviral Particles: sc-75285-V and HoxC13 shRNA (m) Lentiviral Particles: sc-75286-V.

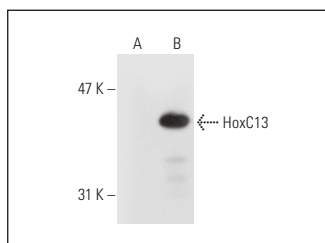
Molecular Weight of HoxC13: 35 kDa.

Positive Controls: HoxC13 (h): 293T Lysate: sc-111609.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

## DATA



HoxC13 (SS-39): sc-81967. Western blot analysis of HoxC13 expression in non-transfected: sc-117752 (A) and human HoxC13 transfected: sc-111609 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Luo, J., et al. 2018. HoxC13 promotes proliferation of esophageal squamous cell carcinoma via repressing transcription of CASP3. *Cancer Sci.* 109: 317-329.
2. Ishii, Y., et al. 2020. The homeobox transcription factor HOXC13 upregulates human papillomavirus E1 gene expression and contributes to viral genome maintenance. *FEBS Lett.* 594: 751-762.
3. Ishii, Y., et al. 2024. Differential requirement of the transcription factor HOXC13 for the stable maintenance of human papillomavirus genome among high-risk genotypes. *Virology* 597: 110151.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.